# INDEX TO VOLUME XV


ACIDOPHILUS milk, An economical method for producing ..... 71
Air during the homogenization of cream and ice cream mixes, The incorporation of ..... 367
Alfalfa hay and irrigated pasture on growth of Holstein heifers, A study of the effects of ..... 435
Alfalfa hay as the sole roughage and on alfalfa and timothy combined, The behavior of cows on ..... 171
Alfalfa plant, The physiological effect of rations restricted principally or solely to the ..... 23
Alfalfa to the rapid absorption of feed flavor in milk, The relation of the soluble portion of ..... 299
American Dairy Science Association, Membership of the ..... 499
American Dairy Science Association, Proceedings of the 27th annual meeting of the ..... 489
ANDERSON, ARTHUR K., and TRIEBOLD, HOWARD O. A biochemical study of irradiated milk ..... 469
ARNOLD, P. T., NEAL, W. M., and BECKER, R. B. Influence of arsenical dipping on yield of milk by dairy cows ..... 407
Arsenical dipping on yield of milk by dairy cows, Influence of ..... 407
ATKESON, F. W. (See Woods, Ella) ..... 475
Atmospheric drum drier, Some factors influencing the capacity of the ..... 147

BACTERIA in butter, Development of the Escherichia-Aerobacter group of ..... 199
Bacterial count of machine-drawn milk, The influence of non-stripping on the ..... 163
Bacterial flora of low count milk, The effect of pasteurization on the ..... 90
Bacteriological examination of dry milk and related powders, Methods for use in the ..... 383
(Bacteriology) Action of an Aerobic spore-forming organism on evaporated milk ..... 220
(Bacteriology) Control of spreaders in milk plates ..... 142
(Bacteriology) The Coli-aerogenes determination in pasteurization control ..... 321
(Bacteriology) The effect of pasteurization upon Brucella melitensis var. suis ..... 6
(Bacteriology) Note on use of alkaline water blanks for plating dried milk products ..... 391
(Bacteriology) Studies on Lactobacillus thermophilus ..... 393
(Bacteriology) The viability of Lactobacillus acidophilus as affected by freezing in a sherbet mixture ..... 413
BARNHART, J. L. (See Thurston, L. M.) ..... 401
BECKER, R. B. (See Arnold, P. T.) 407
BENDER, R. C., and MAYNARD, L. A. Fat metabolism in the lactating goat 242
BENDER, R. C., and SUPPLEE, G. C. The vitamin "B" and "G" content of dry skimmed milk and dry whey ..... 445
BENDIXEN, H. A. (See Prouty, Chas. C.) ..... 413
BLACK, L. A. The effect of pasteurization on the bacterial flora of low count milk ..... 99
Blood for inorganic phosphorus in dairy heifers, Method for obtaining representative samples of ..... 313
Blood of dairy cows before and after parturition and its relation to milk fever, The chemistry of the ..... 116
BRANDT, P. M. (See Haag, J. R.) ..... 23
BREED, R. S., and DOWNS, P. A. Methods for use in the bacteriological examination of dry milk and related powders ..... 383
BROADHURST, JEAN, and KRUG, ELSIE. Control of spreaders in milk plates 142

BRODIE, JESSIE B. (See MacLeod, Florence L.) ..... 14
BROWN, J. B. (See Sutton, T. S.) 209
Brucella melitensis var. suis, The effect of pasteurization upon ..... 6
Butter, Development of the Escherichia-aerobacter group of bacteria in 199
Butter fat in the dairy cow, The effect of corn oil on milk and butter fat production and on the composition of ..... 209

CALCIUM and phosphorus metabolism in dairy cows. V. The relative assimilation of calcium from grades 1 and 3 timothy hay ..... 267
Calves, A comparison between ground soybeans and linseed oilmeal as protein supplements for growing dairy 277
CHARLTON, DAVID B. Studies on Lactobacillus thermophilus ..... 393
Cheese, Factors affecting the body and texture of processed ..... 29
Cheese in a sealed package, Ripening 185
Cheese spreads ..... 155
Chloride concentration of milk produced during irregular intervals between milking, The lactose and ..... 1
Churnability of artificial emulsions prepared with the known emulsifying agents of cream, The ..... 371
Clover and Kentucky Blue Grass, Vitamin A content of pasture grasses. 1. White ..... 345
Coagulation of milk, The heat ..... 345
Coagulation of skimmilk, Some observations on the effect of temperature of pasteurization on the acid ..... 401
Cod liver oil in the ration upon the quantity and quality of cow's milk, The effect of ..... 283
COLE, W. C. A microscopic study of ice cream texture ..... 421
COLE, WILFORD C. Relation of temperature of ice cream to the distribution of certain of its components between the liquid and solid phases 254
Coli-aerogenes determination in pasteurization control, The ..... 321
Combs, W. B. Some factors influencing the capacity of the atmospheric drum drier ..... 147
CONVERSE, H. T. (See Meigs, Edward B.) ..... 171
Corn oil on milk and butter fat production and on the composition of butter fat in the dairy cow, The effect of ..... 209
Corrosion of metals by milk, The ..... 73
Corrosion tests of various metals in milk, The solubility of metals in milk. II. Submerged ..... 42
Cows, A study of the gestation period of Holstein-Friesian ..... 87
Cows before and after parturition and its relation to milk fever, The chemistry of the blood of dairy ..... 116
Cows, V. The relative assimilation of calcium from grades 1 and 3 timothy hay. Calcium and phosphorus metabolism in dairy ..... 267
Cream and of ice cream mixes, The incorporation of air during the homogenization ..... 367
Cream and their relation to churning. I. The churnability of artificial emulsions prepared with the known emusifying agents of cream, Substances adsorbed on the fat globules in ..... 371

DEYSHER, E. F. (See Holm, G. E.) ..... 331
Digestibility of protein of dried milk manufactured by different processes, The ..... 62
DOWNS, P. A. (See Breed, R. S.) ..... 383
Dried milk manufactured by different processes, The digestibility of protein of ..... 62
Dried milk products, Note on use of alkaline water blanks for plating ..... 391
(Dried milk) Some factors influencing the capacity of the atmospheric drum drier ..... 147
Dry milk and related powders, Methods for use in the bacteriological examination of ..... 383
Dry skimmed milk and dry whey, The vitamin "B" and "G" content of ... 445

ECKLES, C. H. (See Wallis, G. C.) 163
Emulsions prepared with the known emulsifying agents of cream, Substances adsorbed on the fat globules in cream and their relation to churning. I. The churnability of artificial ..... 371
Escherichia-aerobacter group of bacteria in butter, Development of the 199
Evaporated milk, Action of an Aerobic spore-forming organism on ..... 220
Evaporated milk, The food value of frozen ..... 113

FAT globules in cream and their relation to churning. The churnability of artificial emulsions prepared with the known emulsifying agents of cream, Substances adsorbed on the ..... 371
Fat metabolism in the lactating goat 242
Fat percentage of milk as affected by feeding milk to dairy cows, The ..... 132
Feed cost and butterfat production in dairy cattle, The functional relation of yearly ..... 212
Feeding experiment, A study of methods used in conducting a silage ..... 303
Feeding milk to dairy cows, The fat percentage of milk as affected by ..... 132
FINK, COLIN, and ROHRMAN, FREDERICK A. The corrosion of metals by milk ..... 73
Flavor in milk, The relation of the soluble portion of alfalfa to the rapid absorption of feed ..... 299
Food value of frozen evaporated milk, The ..... 113
Freezing in a sherbert mixture, The viability of Lactobacillus acidophilus as affected by ..... 413

GEBHARDT, H. T., and SOMMER, H. H. The solubility of metals in milk. II. Submerged corrosion tests of various metals in milk ..... 42
Gestation period of Holstein-Friesian cows, A study of the ..... 87
GOULD, B. S. The detection of inefficiently pasteurization milk based on a modification of the new Rothenfusser test ..... 230
GRAHAM, R. A. (See Black, L. A.) ... 99

HAAG, J. R., JONES, I. R., and BRANDT, P. M. The physiological effect of rations restricted principally or solely to the alfalfa plant 23
HALE, W. S. (See Turner, W. A.) ..... 267
HAMMER, B. W., and HUSSONG, R. V. Action of an Aerobic spore-forming organism on evaporated milk ..... 220
HAMMER, B. W., and YALE, M. W. Development of the Escherichia-aerobacter group of bacteria in butter ..... 199
HART, E. B. (See Wilson, L. T.) ..... 116
HAUGE, S. M. (See Hilton, J. H.) ..... 277
Hay and irrigated pasture on growth of Holstein Heifers, A study of the effects of alfalfa ..... 435
Heat coagulation of milk, The ..... 345
Heat coagulation of milk. I. Variations in the compositions, heat stability, and other tests of milk from four cows during the course of a lactation period, The ..... 331
Heifers, A study of the effects of alfalfa hay and irrigated pasture on growth of Holstein ..... 435
HENDERSON, H. O., and VAN LANDINGHAM, A. H. Method for obtaining representative samples of blood for inorganic phosphorus in dairy heifers ..... 313
HENDERSON, J. L. (See Roadhouse, C. L.) ..... 1
HENDERSON, J L. (See Roadhouse, C. L.) ..... 299
HILTON, J. H., WILBUR, J. W., and HAUGE, S. M. A comparison between ground soybeans and linseed oilmeal as protein supplements for growing dairy calves ..... 277
HODGSON, R. E. The functional relation of yearly feed cost and butterfat production in dairy cattle ..... 212
HOLM, G. E., WEBB, B. H., and DEYSHER, E. F. The heat coagulation of milk. I. Variations in the compositions, heat stability, and other

tests of milk from four cows during the course of a lactation period ..... 331
HOLM, G. E. (See Webb, Byron H.) 345
Homogenization of cream and of ice cream mixes, The incorporation of air during the ..... 367
HUBBARD, E. T. (See Combs, W. B.) 147
HUSSONG, R. V. (See Hammer, B. W.) ..... 220

ICE cream mixes, The incorporation of air during the homogenization of cream and of ..... 367
Ice cream mix, the effect of prolonged holding at pasteurization temperature on the properties of an ..... 481
Ice cream texture, A microscopic study of ..... 421
Ice cream to the distribution of certain of its components between the liquid and solid phases, Relation of temperature of ..... 254
Ice refrigerated cooling unit under controlled conditions, Tests of an ..... 190
Irradiated milk, A biochemical study of ..... 469

JOHNSON, R. F. (See Woods, Ella) ..... 475
JOHNSTON, E. W. (See Sutton, T. S.) 209
JONES, I. R. (See Haag, J. R.) ..... 23

KANAZAWA, K. (See Miyawaki, A.) ..... 62
KANDA, S. (See Miyawaki, A.) ..... 62
KANE, E. A. (See Turner, W. A.) ..... 267
Kentucky Blue Grass, Vitamin A content of pasture grasses. I. White clover and ..... 475
KNAYSI, GEORGE. An economical method of producing acidophilus milk ..... 71
KNOTT, J. C. A study of the gestation period of Holstein-Friesian cows ..... 87
KUG, ELSIE. (See Broadhurst, Jean) 142

LACTOBACILLUS acidophilus as affected by freezing in a sherbet mixture, The viability of ..... 413
Lactobacillus thermophilus, Studies on 393
Lactose and chloride concentration of milk produced during irregular intervals between milking, The ..... 1
LANGEVIN, E. (See McGrady, M. H.) 321
LEIGHTON, ALAN. (See Williams, O. E.) ..... 367
LOUDER, E. A. The food value of frozen evaporated milk ..... 113

MACHINE-DRAWN milk, The influence of non-stripping on the bacterial count of ..... 163
MACLEOD, FLORENCE L., BRODIE, JESSIE B., and MACLOON, EMILY R. The Vitamin A, B ($B_1$) and G ($B_2$) contents of milk throughout the year ..... 14
MACLOON, EMILY R. (See MacLeod, Florence L.) ..... 14
MACY, H. (See Wallis, G. C.) ..... 163
Manganese content of milk, The ..... 461
MARTIN, W. H. The effect of prolonged holding at pasteurization temperature on the properties of an ice cream mix ..... 481
MAYNARD, L. A. (See Bender, R. C.) 242
MCGRADY, M. H., and LANGEVIN, E. The Coli-aerogenes determination in pasteurization control ..... 321
MCNUTT, S. H. (See Murray, Chas.) 6
MEIGS, E. B.. and CONVERSE, H. T. The behavior of cows on alfalfa hay as the sole roughage and on alfalfa and timothy combined ..... 171
Membership of the American Dairy Science Association ..... 499
Metals in milk. II. Submerged corrosion tests of various metals in milk, The solubility of ..... 42
Metabolism in the lactating goat, Fat 242
Microscopic study of ice cream, A ..... 421
Milk, A biochemical study of irradiated ..... 469
Milk and butter fat production and on the composition of butter fat in the dairy cow, The effect of corn oil on ..... 209
Milk and dry whey, The vitamin "B" and "G" content of dry skimmed 445
Milk and related powders, Methods for use in the bacteriological examination of dry ..... 383

Milk based on a modification of the new Rothenfusser test, The detection of inefficiently pasteurized ..... 230
Milk by dairy cows, Influence of arsenical dipping on yield of ..... 407
Milk as affected by feeding milk to dairy cows, The fat percentage of 132
Milk, An economical method of producing acidophilus ..... 71
Milk fever, The chemistry of the blood of dairy cows before and after parturition and its relation to ..... 116
Milk manufactured by different processes, The digestibility of protein of 62
Milk produced during irregular intervals between milking, The lactose and chloride concentration of ..... 1
Milk. II. Submerged corrosion tests of various metals in milk, The solubility of metals in ..... 42
Milk, The effect of cod liver oil in the ration upon the quantity and quality of cow's ..... 283
Milk, The effect of pasteurization on the bacterial flora of low count ..... 99
Milk, The food value of frozen evaporated ..... 113
Milk, The heat coagulation of ..... 345
Milk, The influence of non-stripping on the bacterial count of machine-drawn ..... 163
Milk, The manganese content of ..... 461
Milk, The zinc content of ..... 451
Milk throughout the year, The vitamin
MILLER, NORMAN J. (See Prickett, A, B ($B_1$) and G ($B_2$) contents of ... 14
Paul S.) ..... 391
MIYAWAKI, K., KANAZAWA, K., and KANADA, S. The digestibility of protein of dried milk manufactured by different processes ..... 62
MURATA, KIRCHI. (See Sato, Masayoshi) ..... 451
MURATA, KIRCHI. (See Sata, Masayoshi) ..... 461
MURRAY, CHAS., MCNUTT, S. H., and PURWIN, PAUL. The effect of pasteurization upon Brucella melitensis Var. Suis ..... 6
NEAL, W. M. (See Arnold, P. T.) 407
OILMEAL as protein supplements for growing dairy calves, A comparison between ground soybeans and linseed ..... 277
PACKAGE, Ripening cheese in a ..... 185
PALMER, L. S. (See Wiese, Hilda F.) 371
Pasteurization control, The Coli-aerogenes determination in ..... 321
Pasteurization on the acid coagulation of skimmilk, Some observations on the effect of temperature of ..... 401
Pasteurization on the bacterial flora of low count milk, The effect of ..... 99
Pasteurization upon Brucella melitensis Var. Suis, The effect of ..... 6
Pasteurized milk based on a modification of the new Rothenfusser test, The detection of inefficiently ..... 230
Pasteurization temperature on the properties of an ice cream mix, The effect of prolonged holding at ..... 481
Pasture grasses. I. White clover and Kentucky Blue Grass, Vitamin A content of ..... 475
Pasture on growth of Holstein heifers, A study of the effects of alfalfa hay and irrigated ..... 435
PERRY, R. L. Tests of an ice refrigerated cooling unit under controlled conditions ..... 190
PETERSEN, W. E. A formula for evaluating feeds on the basis of digestible nutrients ..... 293
PETERSEN, W. E. (See Wallis, G. C.) 163
Phosphorus in dairy heifers. Method for obtaining representative samples of blood for inorganic ..... 313
Phosphorus metabolism in dairy cows. V. The relative assimilation of calcium from grades 1 and 3 timothy hay, Calcium and ..... 267
Plating dried milk products, Note on use of alkaline water blanks for ..... 391
PRATT, A. D. A study of methods used in conducting a silage feeding

experiment ..... 303
PRICKET, PAUL S., and MILLER, NORMAN J. Note on use of alkaline water blanks for plating dried milk products ..... 391
Proceedings of the 27th annual meeting of the American Dairy Science Association ..... 489
Processed cheese, Factors affecting the body and texture of ..... 29
Production and on the composition of butter fat in the dairy cow, The effect of corn oil on milk and butter fat ..... 209
Protein of dried milk manufactured by different processes, The digestibility of ..... 71
Protein supplements for growing dairy calves, A comparison between ground soybeans and linseed oilmeal as ..... 277
PROUTY, C. C. (See Black, L. A.) ..... 99
PROUTY, C. C., and BENDIXEN, H. A. The viability of Lactobacillus acidophilus as affected by freezing in a sherbet mixture ..... 413
PURWIN, PAUL. (See Murray, Chas) 6

(RATIONS) A formula for evaluating feeds on the basis of digestible nutrients ..... 293
Rations restricted principally or solely to the alfalfa plant, The physiological effect of ..... 23
Ration upon the quantity and quality of cow's milk, The effect of cod liver oil in the ..... 283
Refrigerated cooling unit under controlled conditions, Tests of an ice ..... 190
ROADHOUSE, C. L., and HENDERSON, J. L. The lactose and chloride concentration of milk produced during irregular intervals between milking 1
ROADHOUSE, C. L., and HENDERSON, J. L. The relation of the soluble portion of alfalfa to the rapid absorption of feed flavor in milk ..... 299
ROGERS, L. A. Ripening cheese in a sealed package ..... 185
ROHRMAN, FREDERICK A. (See Fink, Colin) ..... 73
Roughage and on alfalfa and timothy combined, The behavior of cows on alfalfa hay as the sole ..... 171

SATO, MASAYOSHI, and MURATA, KIRCHI. The manganese content of milk ..... 461
SATO, MASAYOSHI, and MURATA, KIRCHI. The zinc content of milk ..... 451
SHAW, A. O. (See Woods, Ella) ..... 475
Sherbet mixture, The viability of Lactobacillus acidophilus as affected by freezing in a ..... 413
Silage feeding experiment, A study of methods used in conducting a ..... 303
Skimmilk, Some observations on the effect of temperature of pasteurization on the acid coagulation of ..... 401
SMITH, L. S. (See Louder, E. A) ..... 113
SOMMER, H. H. (See Templeton, Hugh L.) ..... 155
Sommer, H. H. (See Templeton, HUGH L.) ..... 29
SOMMER, H. H. (See Gebhardt, H. T.) ..... 42
Soybeans and linseed oilmeal as protein supplements for growing dairy calves, A comparison between ground ..... 277
SUPPLEE, G. C. (See Bender, R. C.)
SUTTON, T. S., BROWN, J. B., and JOHNSTON, E. W. The effect of corn oil on milk and butter fat production and on the composition of butter fat in the dairy cow ..... 209

TEMPERATURE of ice cream to the distribution of certain of its components between the liquid and solid phases, Relation of ..... 254
TEMPLETON, HUGH L., and SOMMER, H. H. Cheese spreads ..... 155
TEMPLETON, HUGH L., and SOMMER, H. H. Factors affecting the body and texture of processed cheese ..... 29
THURSTON, L. M., and BARNHART, J. L. Some observations on the effect of temperature of pasturization on the acid coagulation of skimmilk ..... 401

Timothy combined, The behavior of cows on alfalfa hay as the sole roughage and on alfalfa and ..... 171
Timothy hay, Calcium and phosphorus metabolism in dairy cows. V. The relative assimilation of calcium from grades 1 and 3 ..... 267
TRIEBOLD, HOWARD O. (See Anderson, Arthur K.) ..... 469
TURNER, W. A., KANE, E. A., and HALE, W. S. Calcium and phosphorus metabolism in dairy cows. V. The relative assimilation of calcium from grades 1 and 3 timothy hay ..... 267

VAN LANDINGHAM, A. H. (See Henderson, H. O.) ..... 313
Vitamin A, B ($B_1$) and G ($B_2$) contents of milk throughout the year, The ..... 14
Vitamin A content of pasture grasses. I. White clover and Kentucky Blue Grass ..... 475
Vitamin "B" and "G" content of dry skimmed milk and dry whey, The ..... 445

WALLIS, G. C., ECKLES, C. H., PETERSEN, W. E., and MACY, H. The influence of non-stripping on the bacterial count of machine-drawn milk ..... 163
WEBB, B. H. (See Holm, G. E.) ..... 331
WEBB, B. H., and HOLM, G. E. The heat coagulation of milk ..... 345
Whey, The vitamin "B" and "G" content of dry skimmed milk and dry ..... 445
WIESE, HILDA F., and PALMER, L. S. Substance adsorbed on the fat globules in cream and their relation to churning. I. The churnability of artificial emulsions prepared with the known emulsifying agents of cream ..... 371
WILBUR, J. W. (See Hilton, J. H.) ..... 277
WILLARD, H. S. A study of the effects of alfalfa hay and irrigated pasture on growth of Holstein heifers ..... 435
WILLIAMS, O. E., and LEIGHTON, ALAN. The incorporation of air during the homogenization of cream and of ice cream mixes ..... 367
WILSON, L. T., and Hart, E. B. The chemistry of the blood of dairy cows before and after parturition and its relation to milk fever ..... 116
WOODS, ELLA, SHAW, A. O., ATKESON, F. W., and JOHNSON, R. F. Vitamin A content of pasture grasses. I. White clover and Kentucky Blue Grass ..... 475

YALE, M. W. (See Hammer, B. W.) ..... 199

ZINC content of milk, The ..... 451